

Method and Apparatus for One-Stage and Two-Stage Noise Feedback Coding of Speech and Audio Signals

Abstract

Codec structures for achieving two-stage prediction and two-stage noise spectral shaping at the same time, resulting in a Two-Stage Noise Feedback Coding (TSNFC) method. One approach combines two predictors into a single composite predictor; and derives appropriate filters for use in a conventional single-stage NFC codec structure. Another approach duplicates a conventional single-stage NFC codec structure in a nested manner, thereby decoupling the operations of the long-term prediction and long-term noise spectral shaping from the operations of the short-term prediction and short-term noise spectral shaping.